

Work Order ID 81497

**\*81497\***

Page 1

March-14-12 4:23:42 PM

Item ID: D3210-<sup>B</sup>

Accept

**\*N900040100\***Setup Start **\*NS1\***

Revision ID:

Stop **\*NS2\***

Item Name: Doubler

Start Date: 14/03/2012 Start Qty: 10.00

**\*10\***

Cust Item ID:

Required Date: 28/03/2012 Req'd Qty: 10.00

**\*10\***

Customer:

Reference:

Approvals:

Process Plan: MLSDate: 12/03/14

Tooling:

Date:

Run Start **\*NR1\***

QC:

Date:

SPC (Y/N):

Date:

Stop **\*NR2\***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
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Draw Nbr

Revision Nbr

D3210

B

100

0.00

**\*100\***

FLOW WATER JET

Waterjet

Memo

0.00

FLOW CNC Waterjet

1-Cut as per Dwg D3210 Dwg Rev: B Prog Rev: B 2-

Debur if necessary

2024 .080

10

0

Jm

12-4-24

110

0.00

**\*110\***

QC2- Inspect parts off machine FAI/FAIB

QC

Memo

0.00

Quality Control

10

0

Jm

12-4-24

120

0.00

**\*120\***

QC8- Inspect parts - second check

QC

Memo

0.00

Quality Control

Sizler/24

(X)

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries

# Work Order ID 81497

**\*81497\***

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March-14-12 4:23:42 PM

Item ID: D3210-1 Accept **\*N900040100\*** Setup Start **\*NS1\***  
 Revision ID: Stop **\*NS2\***  
 Item Name: Doubler  
 Start Date: 14/03/2012 Start Qty: 10.00 **\*10\*** Cust Item ID:  
 Required Date: 28/03/2012 Req'd Qty: 10.00 **\*10\*** Customer:  
 Reference:

Approvals: Process Plan: \_\_\_\_\_ Date: \_\_\_\_\_ Tooling: \_\_\_\_\_ Date: \_\_\_\_\_ Run Start **\*NR1\***  
 QC: \_\_\_\_\_ Date: \_\_\_\_\_ SPC (Y/N): \_\_\_\_\_ Date: \_\_\_\_\_ Stop **\*NR2\***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
130		0.00							
<b>*130*</b>	Small Fab								
Small Fab	Memo	0.00							
Small Fab	Debur								
140		0.00							
<b>*140*</b>	QC5- Inspect part completeness to step on W/O	0.00							
QC	Memo	0.00							
Quality Control									
150		0.00							
<b>*150*</b>	Chemical Conversion Coat per QSI005 4.1	0.00							
HandFinish	Memo	0.00							
Hand Finishing									

(D) 2/16/12-425

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
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**NOTE:** Date & initial all entries

**\*81497\***

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**\*N900040100\***

Setup Start **\*NS1\***

Stop \*NS2\*

**Start Date:** 14/03/2012    **Start Qty:** 10.00    **\*10\***

**Cust Item ID:**

**Required Date:** 28/03/2012      **Req'd Qty:** 10.00      **\*10\***

**Customer:**

**Reference:**

**Approvals:**      **Process Plan:** \_\_\_\_\_ **Date:** \_\_\_\_\_ **Tooling:** \_\_\_\_\_ **Date:** \_\_\_\_\_

Run Start \*NR1\*

QC: \_\_\_\_\_ Date: \_\_\_\_\_ SPC (Y/N): \_\_\_\_\_ Date: \_\_\_\_\_

Stop \*NR2\*

**Insp.  
Stamp**

Black Sandtex(Ref:4.3.5.7) per QSI005 4.3

0.00

**\*160\***

## Memo

0.00

Powdercoat

START TIME:

OVEN TEMPERATURE:

## Powder Coating

FINISH TIME:

9730

170

QC3- Inspect Part Finish

0.00

**\*170\***

## Memo

0.00

OC

## Quality Control

180

Identify as per dwg & Stock Location: 210 0.00

0.00

**\*180\***

## Memo

0.00

### Packaging

## Packaging

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

**\*81497\***

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**Accept**

**\*N900040100\***

Setup Start \*NS1\*

Stop \*NS2\*

**Start Date:** 14/03/2012    **Start Qty:** 10.00    **\*10\***

**Cust Item ID:**

**Required Date:** 28/03/2012      **Req'd Qty:** 10.00      **\*10\***

**Customer:**

**Reference:**

**Approvals:**      **Process Plan:** \_\_\_\_\_ **Date:** \_\_\_\_\_ **Tooling:** \_\_\_\_\_ **Date:** \_\_\_\_\_

Run Start \*NR1\*

QC: \_\_\_\_\_ Date: \_\_\_\_\_ SPC (Y/N): \_\_\_\_\_ Date: \_\_\_\_\_

Stop \*NR2\*

### Operation Description

## Set Up/ Run Hours

## Tool ID

Tool #

## Plan Code

**Accept  
Qty**

Reject  
QtyReject  
Number

**Insp.  
Stamp**

190

QC21- Final Inspection - Work Order Release

0.00

\*190\*

QC

## Memo

0.00

## Quality Control

1204-20

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries



# Picklist Print

March-14-12 4:23:45 PM

Page 1

Work Order ID: 81497

\*81497\*

Parent Item: D3210-1

\*D3210-1\*

Parent Item Name: Doubler

Start Date: 14/03/2012

Required Date: 28/03/2012

Start Qty: 10.00

Required Qty: 10.00

Comments: IPP Rev:A New Issue 05-11-17 JLM  
IPP Rev:B Now On Waterjet 06-10-24 JLM

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
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M2024T3S.080

Purchased

No

100

sf

269.8000

1.7

17.89474

\*M2024T3S 080\*

\*\*

2024-T3 .080 sheet

## Location

## Loc Qty

## Loc Code

MAT022

269.8

105411

6

109424

4

110347

0.5

112331

3

113796

5

114025

10.7

116604

5.8

117392

19.1

118180

46

119117

25.7

120989

144

120989.

18

12-4-24

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

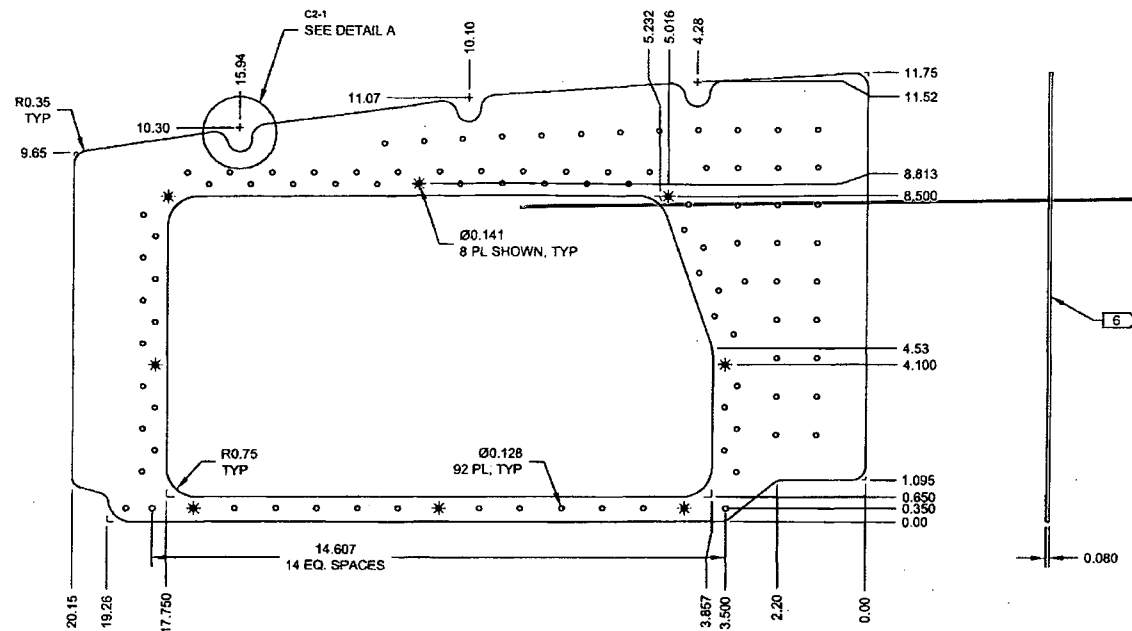
Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
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			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries





**DETAIL A**  
SCALE 2X, 3 PL D7-1

SHOP COPY  
RETURN TO  
ENGINEERING  
UNCONTROLLED COPY  
SUBJECT TO AMENDMENT  
WITHOUT NOTICE  
WORK ORDER  
NO. 81497 M65

**RELEASED**  
2011-06-14

12/03/14

**D3210-1 DOUBLER**

**D3210-1 NOTES:**

- 1) MATERIAL: 2024-T3 ALUMINUM SHEET, 0.080 THICK, PER QQ-A-250/4 OR AMS-QQ-A-250/4 OR AMS 4037 OR ASTM B209 REF. DART SPEC M2024T3S.080
- 2) FINISH: CHEMICAL CONVERSION COAT PER DART QSI 005 4.1 POWDER COAT "BLACK SANDEX" (4.3.5.7) PER DART QSI 005 4.3
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: IDENTIFY WITH DART P/N "D3210-1" AND B/N "BXXXXX" PER QSI 044 6.1
- 7) WEIGHT: 0.86 lbs
- 8) MAKE PER "D3210-1\_REVB.DXF"

B	FORMAT TO CURRENT STD; ADD D3210-1B. REASON: PAR11-109.	MB	11.06.03
A	NEW ISSUE	CP	03.09.03
REV.	DESCRIPTION	BY	DATE
DESIGN			
DRAWN			
CHECKED			
MFG. APPR.			
APPROVED			
DE APPR.			
DATE	11.06.03		

**DART AEROSPACE LTD**  
HAWKESBURY, ONTARIO, CANADA

DRAWING NO. **D3210** REV. B  
SHEET 1 OF 2  
TITLE **DOUBLER** SCALE NTS

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W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

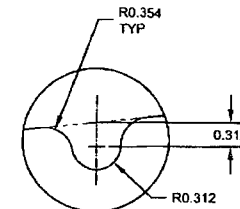
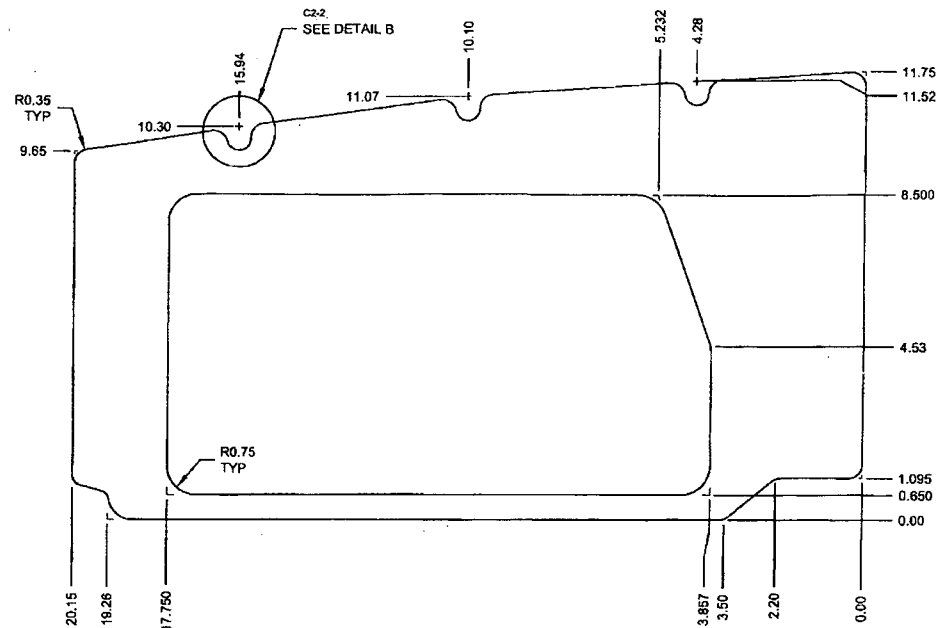
Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

81497



**DETAIL B**  
SCALE 2X, 3 PL

**D3210-1B BLANK DOUBLER**

**D3210-1B NOTES:**

- 1) MATERIAL: 2024-T3 ALUMINUM SHEET, 0.080 THICK, PER QQ-A-250/4 OR AMS-QQ-A-250/4 OR AMS 4037 OR ASTM B209 REF. DART SPEC M2024T3S.080
- 2) FINISH: CHEMICAL CONVERSION COAT PER DART QSI 005 4.1 POWDER COAT "BLACK SANDEX" (4.3.5.7) PER DART QSI 005 4.3
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: IDENTIFY WITH DART P/N "D3210-1B" AND B/N "BXXXXX" PER QSI 044 6.1
- 7) WEIGHT: 0.87 lbs
- 8) MAKE PER "D3210-1B\_REV8.DXF"

**RELEASED**  
2011-06-14

DESIGN		<b>DART AEROSPACE LTD</b>
DRAWN		HAWKESBURY, ONTARIO, CANADA
CHECKED		DRAWING NO. REV. B
MFG. APPR.		D3210 SHEET 2 OF 2
APPROVED		TITLE SCALE
DE APPR.		DOUBLER NTS
DATE	11.06.03	COPYRIGHT © 2003 BY DART AEROSPACE LTD

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W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries